

~~AMENDED CLAIMS~~

~~[received by the International Bureau on 17 January 1997 (17.01.97);
original claims 1-13 replaced by amended claims 1-7 (1 page)]~~

1. A pharmaceutical composition for targeting double stranded nucleic acids, characterized in that it comprises an effective amount of a padlock probe oligonucleotide having two free nucleic acid end parts which are at least partially complementary to and capable of hybridizing with two at least substantially neighboring respective regions of a target nucleic acid sequence so that the padlock probe can be circularized by joining said free end parts and catenate with the target sequence for direct inhibition thereof.
2. A composition according to claim 1, in admixture with a suitable carrier.
3. A composition according to claim 1, also comprising a linking agent.
4. A composition according to claim 3, wherein linking agent is a ligase enzyme.
5. A composition according to claim 1, comprising mutually chemically reactive compounds at said end parts.
6. A composition according to any of claims 1-5, wherein said padlock probe comprises non-natural nucleic acids or polymers.
7. A composition for targeting nucleic acids, comprising an effective amount of a padlock probe having two free nucleic acid end parts which are at least partially complementary to and capable of hybridizing with two at least substantially neighboring respective regions of a target nucleic acid sequence so that it can be circularized and catenate with the target sequence, for use as a medicament.